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Montana and the Sky



Department of Transportation – Aeronautics Division

Vol. 45 No. 10

October 1994



Mike Ferguson proudly exhibits his illustrious award: a gold medallion of Winged Victory on a blue ribbon.

Counterparts Honor Ferguson

At the 63rd Annual Meeting of the National Association of State Aviation Officials (NASAO), held last month in Bismarck, North Dakota, Mike Ferguson was presented the "Kenneth A. Rowe Ambassador of State Aviation Award."

Ken Rowe, former Virginia Aeronautics Director, retired earlier this year. In his honor the NASAO Board of Directors approved a resolution honoring Ken "as an ambassador for NASAO and the State Aviation Agencies, promoting and instilling in others the belief that said agencies play a pivotal role in the performance of the national air transportation system." The award was established by resolution and is to be presented in Ken's name "to individuals that embody his spirit, optimism, and fierce

pride in the capabilities of the State Aviation Agencies."

In this spirit, NASAO Executive Vice President Ed Scott, on behalf of the state aviation directors, acknowledged Ferguson for his support and leadership of NASAO, having served as its President in 1989 and was recognized as the second longest serving state director of all current directors which includes all fifty states, Guam and Puerto Rico. Other accomplishments mentioned included world and U.S. flight records held, participation in the EAA Young Eagles Program, offices held in other aviation organizations, and for his continued leadership, participation, and support of the many issues important to the aviation industry.

EAS Funding Saved

The Essential Air Service program in Montana will receive full funding, once again surviving budget cuts.

The House-Senate Conference Committee for the FY95 Transportation Appropriations Bill ensured the preservation of EAS service for all seven Montana communities. Glendive, Miles City and Lewistown were three of 18 EAS points examined for possible elimination of service.

The action was a great victory for Montana. Much credit is due Senators Conrad Burns and Max Baucus and Representative Pat Williams for their diligent efforts in ensuring funding for this important program.

Big Sky Airlines, Montana's EAS carrier, has announced a marketing agreement with Frontier Airlines effective October 1. Passengers connecting from one carrier to the other at Billings will gain the benefit of joint fares, joint ticketing, baggage transfer services and other conveniences.

This marketing alliance will make it easier for regional passengers to travel to points across the country, and at lower fares. Frontier's flights are timed to arrive and depart Denver during the main connecting banks of other airlines, allowing its passengers to make quick transfers to flights serving dozens of other key cities.

PLEASE RETURN

Administrator's Column

Expanded Use Of Public Aircraft Opposed: The National Air Transportation Association (NATA) is strongly opposing the FAA's recent broadened interpretation on the use of "public aircraft" for commercial purposes. The NATA feels that government agencies should not be allowed to operate "public aircraft," mostly military surplus, to compete commercially with the private sector while at the same time not being required to comply with most FAA regulations. NATA feels that by not having to operate by the same standards they (the government agencies) have an unfair financial advantage over the private operators they are competing against.

Transportation Bill To Include Support For Learn To Fly Program: The transportation bill which funds the FAA has language which encourages the Office of FAA Flight Standards to promote the general aviation industry's learn to fly programs. The Learn To Fly program is under the umbrella of the National Air Transportation Association (NATA) Foundation. It was noted that U.S. flight training is in a crisis situation. Pilot starts are at an all-time low with 138,000 in 1977 to 66,000 in 1993. It is the intent of Congress that the FAA take immediate steps to support the civil flight training programs.

MPA Fall Fly-In A Big Success: The weather couldn't have been more beautiful for flying to Glendive from anywhere in Montana to join in the well planned MPA Fall Fly-in on the week end of September 23-25. The programs were educational as well as entertaining and the food was plentiful and delicious. The hangar decorations were a great addition. Saturday afternoon an excellent airshow was provided in three outstanding aerobatics performances by Roger Meggers of Baker in his Pitts S2S; Larry French of Wolf Point in his Christian Eagle and by Phil Petrik of Sidney in his Pitts S2S. The Friday and Saturday dances offered good music and were enjoyed by all. A first, at least for me, was the Sunday morning Gospel music followed by a non-denominational church service in the hangar. A delicious fly-away breakfast was also provided. An expression of appreciation as well as congratulations are certainly due to Pat Lifo, President of the Glendive MPA Hangar and to all of the other wonderful people who made this such an enjoyable fly-in.

Gratitude For Honor Bestowed: It was with total surprise and a great honor to receive the first Kenneth A. Rowe Ambassador of State Aviation recognition award during the National Association of State Aviation Officials annual conference at Bismarck, N.D. during the awards banquet on September 21, 1994. Ken Rowe, recently retired after serving 17 years as Director of Virginia's Department of Aeronautics and has been a very strong and active ambassador for state aviation development. Ken has gained the respect of all who have known and worked with him. I am humbled by this honor and it is with a great deal of pride that I accept this prestigious award from my NASAO colleagues.



SORRY!

We apologize for the late mailing of the September issue of the newsletter and in particular to Aerotronics, Inc. of Billings. An invitation to their Annual Open House held September 30 and October 1 was included in the newsletter but not mailed until after the event. We understand that attendance was great and a good time was had by all! A friendly reminder that newsletter items should be submitted for publication in the issue two months prior to your event.



Montana and the Sky
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Official monthly publication
of the
Aeronautics Division
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Helena, Montana 59604
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Montana and the Sky is published monthly
in the interest of aviation in the
State of Montana.

Third Class postage paid at
Helena, Montana 59604

Subscription: \$5 per year
Editor: Debbie Alke
Editorial Assistance:
Q Communications Group

Air Force Academy Appointee

Cadet MSgt Thomas Preston, a Civil Air Patrol cadet attached to Beartooth Composite Squadron in Billings has been accepted to the United States Air Force Academy in Colorado Springs and began his academy training early this summer. Cadet MSgt Preston is a graduate of Billings Skyview High School and has been a Civil Air Patrol cadet for about two years and recently earned the General Billy Mitchell Award and was promoted from cadet master sergeant to cadet flight officer in early June. Cadet MSgt Preston has served on the cadet staff of Beartooth Composite Squadron as both a cadet flight sergeant and most recently as the cadet first sergeant.

The deputy commander for cadet programs, Captain Steven Heffel, is proud to have worked with Cadet MSgt Preston and looks forward to hearing great things about him in the future.



Rocky Mountain College Aviation Update

Rocky Mountain College's Aviation program entered its sixth year this fall semester. Fifteen new students hailing from all points of Montana and the United States entered the program and have already begun their flight training. Two Montana pilots, Doug Parrott and Ruth Mary Lovitt, are assisting the program as adjunct professors this fall semester by teaching advanced aircraft operations and the flight instructors courses. The College is commencing a search for two full-time faculty members for the coming year. Call Dave Kimball at 657-1060 for information about the positions.

A new endowed scholarship for Rocky aviation students has been established by the Hamwey family in memory of their son Nick. The first recipient of the \$500 scholarship is Klay Spearman, an honor student majoring in the Airway Science Aircraft Systems Management flight program.

Eight junior high and senior high students participated in the fourth Aviation Camp conducted on the Rocky campus this past summer. Erick Anderson, a pilot with the Saint Vincent Air Ambulance Service

was the camp director. The camp includes an introduction to fundamentals of aerodynamics, meteorology and navigation and field trips to numerous airport facilities and support operations. The highlight for the students is three flights in training aircraft and two opportunities to experience the school's Frasca 142 flight simulator.

The Rocky "Flying Bears" flight team returned in May from the annual National Intercollegiate Flying Association flying competition with the Aviation Progress Award. They are now preparing to compete in a regional meet in Rangely, Colorado, this month. Five returning members from the national competition provide a strong, experienced core for the team.

Dave Simon of Butte has donated a complete set of Cessna Citation systems manuals and a video tape to the school. It is a valuable resource to support courses in advanced aircraft systems and flight operations. These materials are available at the Aviation Education Center in the RMC Rocky Hall for use by anyone in the aviation community. A big thanks is extended to Dave for his contribution.

Calendar

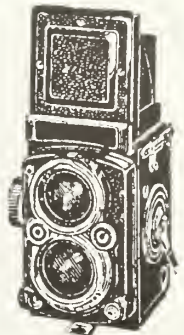
- October 1-2 > Rocky Mountain Air Fair, Denver.
- October 6-8 > Alberta Aviation Council General Meeting, Jasper.
- October 14-15 > Saskatchewan Aviation Council Annual General Meeting, Regina.
- October 15 > AOM Board Meeting, Helena.
- October 21-23 > AOPA Expo '94, Palm Springs, CA.
- November 4 > Montana Aeronautics Board Meeting, Helena.
- November 9 > FAA Listening Session, 7:00 pm, Airport Terminal, Billings.
- February 3-5, 1995 > Flight Instructor Refresher Clinic, Helena.
- March 1-4, 1995 > Montana Aviation Conference, Kalispell.
- March 5-8, 1994 > Upper Midwest Aviation Symposium, Bismarck, North Dakota.

"Photo Flight '94" Contest

Amateur photographers will have an opportunity to win a portion of more than \$5,000 in photography equipment in "Photo Flight '94," a photo contest sponsored by the EAA and Canon cameras and lenses.

The contest will choose the best photos in each of four categories: "Painted by the Sun," "Airport People," "Power in Motion" and "Oshkosh 1994."

Winners will be judged on artistic ability, adherence to theme and photographic skill. Entry deadline is December 15, 1994. Complete rules may be obtained by writing to EAA/Canon Photo Contest, P.O. Box 3086, Oshkosh, WI 54903-3086 or by faxing a request to (414) 426-4873. Winners will be announced in the March 1995 issue of *Sport Aviation* magazine.



MAAA Fly-In



The Montana Antique Airplane Association (MAAA) held its 17th annual fly-in, August 4-7 at Three Forks. Over 100 airplanes visited Progreba Air Field for a fun-filled weekend.



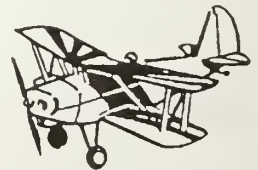
Finding shade under airplane wings was very popular; Mother Nature cooperated and provided superb weather.



Toni Heckel, Zola Hamm, and Darlene Sanders, display a beautiful painting donated by Toni, a fellow aviator and acclaimed Montana artist. Zola was the lucky-winner!



Folks gathered to applaud those who received the many awards given by MAAA. Some of the categories include: Best Classic Award, Hard Luck Trophy, Furthest to Fly Award.



Bram and Edmee Tilroe travelled from Edmonton, Alberta to participate in the festivities. Bram is past president of the Alberta Aviation Council and a great friend to Montana and aviation.

GPS Implementation Plan Published

(Reprinted from Satnav News)

GPS Implementation Schedule*

FAA Headquarters recently released its *GPS Implementation Plan for Air Navigation and Landing*. The 19-page report provides an executive overview of the FAA's activities to establish a satellite-based navigation service for aviation's use in U.S. managed airspace. As such, it is compatible with a number of other more detailed documents, such as the *FAA Satellite Navigation Master Plan* released in June.

The *GPS Implementation Plan* was requested by Secretary of Transportation Federico Pena in March as part of the Department of Transportation's efforts to expedite the use of GPS by all modes of civil transportation. It is divided into three major sections: Technical activities (research, development, and acquisition), Operational activities (standards, certifications, and procedures), and Institutional activities (U.S. Government, U.S. industry, and international). In addition, the plan also summarizes some of the major issues involved in implementing GPS for navigation.

Phases of Flight	FISCAL YEAR (FY)									
	91	92	93	94	95	96	97	98	99	00
En Route										
• Oceanic	M		S							
• Domestic	M		S				P			
Approach & Landing										
• Non-Precision Approach		M	S				P			
• CAT I Precision Approach					U			P**		
• CAT II/III Precision Approach					F					

M = Multisensor S = Supplemental P = Primary U = Special/Private Use F = Feasibility

* Target dates for first available service

** Pending a national decision

□ = Schedule risk (18-month window)

As discussed in the plan, and shown in the figure below, the FAA is implementing a satellite navigation capability in an evolutionary manner in three consecutive stages: multi-sensor input, supplemental means of navigation, and primary means of navigation.

To obtain a copy of the *GPS Implementation Plan for Air Navigation and Landing*, contact Michael Shaw at FAA Headquarters in Washington, DC, 202-287-8754.

West Yellowstone Fly-in

Planes and pilots gathered over the Labor Day weekend at the Yellowstone Airport for the 5th Annual Family Fly-in. Participants from Oregon, Idaho, Utah and Montana, took part in a fire prevention tour and density altitude clinic taught by Ray Glidden, Idaho Aeronautics.

Doris Barton, airport cafe operator, treated folks to authentic Mexican cooking in addition to offering her regular favorites. Meals from Doris' Cantina are always a true "highlight" of the fly-in.





Mike Ferguson was recognized at the Experimental Aircraft Association (EAA) Annual Fly-in at Oshkosh, WI, for his participation and support of the EAA Young Eagles Program. EAA's program goal is to provide one million young people a personal flight experience by the year 2,003, the 100th anniversary of powered flight and the 50th anniversary of EAA. Montana has been asked to provide 3,200 flights in this cooperative effort. At the end of July, Mike had personally given introductory flights to 387 youth; making him second in the nation. Chuck Yeager offers his congratulations to Mike.



Frontier Airlines held inaugural ceremonies at Great Falls and Billings on September 26, to celebrate the start of service to these communities. Frontier began service at Missoula and Bozeman in August. New flights beginning October 13 will link Denver to Albuquerque, NM; El Paso, TX; and Tucson, AZ. These flights will bring to 11 the number of cities linked to Denver on Frontier's route system, and to six the total number of states served by the airline. Samuel D. Addoms (center), was recently named president and chief operating officer of Frontier Airlines. Addoms, who had been Frontier executive vice president, replaces M.C. "Hank" Lund as president. Lund remains Frontier chairman and chief executive officer.

The Airplane Mechanic

By Jim Damron

Same as a doctor with prevention and cure, 'cept his errors kill families, even hundreds for sure.

But like a vet at the barnyard he treats both owner and patient, the mechanic needs skills that cannot be latent.

He's proficient in metal, sheet stock and tube, cast or heat treated, some of it lubed.

He's a genius with fabric, sewing and stitching too, he understands shrinkage, painting and glue.

He'll measure in thousandths or even listen to tones, if questions continue he goes to the phones.

Check and re-check, read and report, review and re-write, interpret and sort.

Wash in and wash out, straighten and twist, it has to be perfect, no hit or missed.

At his place or your place, or wherever it broke, he fixes it sure, no mirrors or smoke.

A cub or a jet, there's no "OK THRU." Just make it legal; you know what to do.

Make haste to make schedule, make parts if you have to, but make it right, my mechanic or a new career awaits you.

I see you watch cross your shoulder, as I climb on my way, and I wonder your feelings, or what you might say.

The passengers don't see you, don't know you were there, don't even consider your risk or your care.

But as we labor from earth and roll smoothly on track, then arrive at the coast without turning back, it's the mechanic who fixed her to whom we should look, he was there the whole flight..... you see, his name's in the book.

Columbus, Montana
September 11, 1994

Crew Resource Management for all Operators

(Reprinted from CALLBACK, NASA's Aviation Safety Reporting System)

In this day and age, there seem to be two types of pilots: those who have heard of CRM, and those who will.

For those who don't fall within the first category, CRM is an acronym for a safety-enhancing concept known as **Crew (or Cockpit) Resource Management**. CRM centers around the philosophy of encouraging crew members to utilize all available resources to ensure a safe flight. These resources include *people* (other crew members, mechanics, air traffic controllers, passengers, and even pilots of other aircraft); *equipment* (autopilots, navigation and communication equipment, back-up aircraft systems); and *other information sources* (established procedures, checklists, aircraft operations manuals, regulations, charts).

Principles of CRM. FAA Advisory Circular AC120-41A, *Crew Resource Management Training*, lists three key areas that are found in many successful CRM programs. The list is not all-inclusive and can be altered to meet the specific needs of each operator.

1. Communications Processes and Decision Behavior

One of the most important elements of good airmanship involves a commitment to keep open the lines of communication. It's imperative to be a good listener, recognizing that every person may have important information to affect that flight's safety. Also important is the ability to voice safety concerns effectively and provide input in a timely fashion. AC 120-51A states that when safety is of concern, crew members must speak up with "appropriate persistence" until the issue is clearly resolved. As illustrated by this next safety report, a reluctance to voice safety concerns is potentially lethal:

There were 3 pilots on board. The PIC was a 4,000 hour charter pilot. The right front seat passenger was a CFII with approximately 550 hours. I was sitting in the back seat and am a CFII with 450 hours...On the initial segment of the approach I informed the PIC that the glide slope...appeared to be inoperative. That raised the minimums to 1,100 feet

MSL...Upon reaching 1,100 feet the PIC continued down below this altitude... [Although we were still in the clouds] I felt fairly comfortable with descending a bit lower since I knew there was a small valley leading to the runway. I expected him to level at 765 feet (the ILS minimums) but he continued on through to approximately 550-630 feet...The airport elevation is 606 feet...I started to tap the CFII in the front seat rather than saying anything on the intercom. As we reached 550 feet I noticed the outline of trees being backlit at our altitude and started yelling for a climb. Obviously we made it...The problem arose because we had...2 people (CFIIs) who did not speak up when we should have...I believe that all 3 pilots were at fault for not being more assertive and aware.

A trademark of open lines of communication is actively soliciting the input of others while making decisions. Once a decision has been reached, that information should be communicated to and acknowledged by other parties.

2. Team Building and Maintenance

Whether flying solo in a small aircraft or commanding a multi-crew heavy transport, each pilot-in-command (PIC) must possess strong leadership skills. In addition to practicing good communication skills, a good leader uses all available resources to accomplish the task. When flying with other crew members, the PIC should build the crew into a cohesive team by explaining early-on just what is expected of them. In a general aviation application, this briefing should be given when flying with other pilots (such as safety pilots or other pilots riding in the right seat). The idea is to avoid any misunderstanding of crew expectations and to spell out other pilots' duties. Wrote one frustrated right-seat GA pilot, following an ILS approach to the wrong runway "In 17 years of flying...I have not seen any material on the duties of a safety pilot." This pilot might have been provided such information by the PIC, or requested it on his own initiative.

Good leaders also maintain a sensitivity towards other crew members and support personnel such as air traffic controllers, line personnel, and mechanics. This includes the

ability to maintain a friendly and supportive tone in the cockpit.

3. Workload Management and Situational Awareness

A preponderance of safety reports contain descriptions of events that were triggered by cockpit distractions or by pilots "getting behind" in workload management. In the late 1970's researcher William P. Monan analyzed 169 distraction-related safety reports. Monan found that the cause of pilot distraction followed quite predictable patterns, suggesting that the adverse effects of distraction could be minimized by pilots' pre-planning many activities and establishing workload priorities.

"I was hand flying the aircraft in climb to FL230. While passing through about FL220 I began [making a] passenger seat belt announcement (turning off seat belt sign)." An altitude overshoot occurred. Following the event this reporter explained his new system of workload prioritization: "In the future I will not make passenger announcements while changing altitudes."

AC 120-51A offers several guidelines regarding workload management: Crew members should speak up when recognizing work overloads in themselves or in others; tasks must be delegated in ways that maximize efficiency; workload distribution must be clearly communicated and acknowledged; and, secondary operational tasks such as dealing with passenger needs must be prioritized to avoid interfering with the primary task of flying the aircraft.

Conclusion. Since its inception CRM has been credited with improving aviation safety by encouraging crew members to use all available resources. CRM is now, however, a substitute for good piloting skills and knowledge of procedures and regulations. Conversely, having strong flying skills and good technical knowledge is no substitute for CRM. Regardless of the size of the aircraft being flown, or its type; and regardless of the pilot flying the aircraft, or that person's experience level, CRM principles should be used to help reduce the potential for error.

FAA Issues Certificates

Private

Rob Clemow	Wisdom
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Instrument

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CFI

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CFI Renew

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Thirty-two hundred copies of this public document were produced at an estimated cost of 37¢ each, for a total cost of \$1,210. This includes \$60 for production, \$526 for postage and \$624 for printing.



October 1994

Bulk Rate
Postage Paid at
Helena, MT 59620
Permit No. 141

PO Box 5178
 Helena, Montana 59604